

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Kie Y. Ahn et al.

Title: LANTHANIDE OXIDE / HAFNIUM OXIDE DIELECTRICS

Docket No.: 1303.107US1

Filed: June 24, 2003

Examiner: Unknown

Serial No.: 10/602315

Due Date: N/A

Group Art Unit: 2812

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450



We are transmitting herewith the following attached items (as indicated with an "X"):

A return postcard.

An Information Disclosure Statement (2 pgs.), Form 1449 (2 pgs.), and copies of 19 cited documents.

If not provided for in a separate paper filed herewith, Please consider this a PETITION FOR EXTENSION OF TIME for sufficient number of months to enter these papers and please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.

Customer Number 21186

By: David R. Cochran

Atty: David R. Cochran

Reg. No. 46,632

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 05 day of March, 2004.

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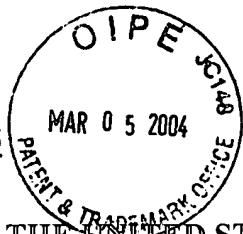
Judy Mosher

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SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.

(GENERAL)

S/N 10/602315



PATENT

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INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

In compliance with the duty imposed by 37 C.F.R. § 1.56, and in accordance with 37 C.F.R. §§ 1.97 *et. seq.*, the enclosed materials are brought to the attention of the Examiner for consideration in connection with the above-identified patent application. Applicants respectfully request that this Information Disclosure Statement be entered and the documents listed on the attached Form 1449 be considered by the Examiner and made of record. Pursuant to the provisions of MPEP 609, Applicants request that a copy of the 1449 form, initialed as being considered by the Examiner, be returned to the Applicants with the next official communication.

Pursuant to 37 C.F.R. §1.97(b), it is believed that no fee or statement is required with the Information Disclosure Statement. However, if an Office Action on the merits has been mailed, the Commissioner is hereby authorized to charge the required fees to Deposit Account No. 19-0743 in order to have this Information Disclosure Statement considered.

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The Examiner is invited to contact the Applicants' Representative at the below-listed telephone number if there are any questions regarding this communication.

Respectfully submitted,

KIE Y. AHN ET AL.

By their Representatives,

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KLUTH, P.A.

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Date 1 March 2004

By

David R. Cochran  
David R. Cochran  
Reg. No. 46,632

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Name Judy Mosher

Judy Mosher  
Signature

Substitute for form 1449A/PTO <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (Use as many sheets as necessary)		Complete if Known <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 40%;">Application Number</td> <td>10/602315</td> </tr> <tr> <td>Filing Date</td> <td>June 24, 2003</td> </tr> <tr> <td>First Named Inventor</td> <td>Ahn, Kie</td> </tr> <tr> <td>Group Art Unit</td> <td>2812</td> </tr> <tr> <td>Examiner Name</td> <td>Unknown</td> </tr> </table>					Application Number	10/602315	Filing Date	June 24, 2003	First Named Inventor	Ahn, Kie	Group Art Unit	2812	Examiner Name	Unknown
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 MAR 05 2004 <small>PATENT &amp; TRADEMARK OFFICE</small>		Attorney Docket No: 1303.107US1														
Sheet 1 of 2																

### US PATENT DOCUMENTS

Examiner Initial *	USP Document Number	Publication Date	Name of Patentee or Applicant of cited Document	Class	Subclass	Filing Date If Appropriate
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### OTHER DOCUMENTS -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
		BENDORAITIS, J G., et al., "Optical energy gaps in the monoclinic oxides of hafnium and zirconium and their solid solutions", <u>Journal of Physical Chemistry</u> , 69(10), (1965),3666-3667	
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		KUKLI, KAUPO , et al., "Influence of thickness and growth temperature on the properties of zirconium oxide films growth by atomic layer deposition on silicon", <u>Thin Solid Films</u> , 410(1-2), (2002),53-60	
		KUKLI, K J., et al., "Properties of hafnium oxide films grown by atomic layer deposition from hafnium tetraiodide and oxygen", <u>Journal of Applied Physics</u> , 92(10), (November 15, 2002),5698-5703	
		LEE, BYOUNG H., et al., "Characteristics of TaN gate MOSFET with ultrathin hafnium oxide (8 Å-12 Å)", <u>Electron Devices Meeting, 2000. IEDM Technical Digest</u> . International, (2000),39-42	
		LEE, BYOUNG H., et al., <u>Technical Digest of International Electron Devices Meetings</u> 2002, 221-224.	

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Substitute for form 1449A/PTO <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <small>(Use as many sheets as necessary)</small>		<i>Complete if Known</i>	
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Sheet 2 of 5		<b>First Named Inventor</b> Ahn, Kie	<b>Group Art Unit</b> 2812
		<b>Examiner Name</b> Unknown	
Attorney Docket No: 1303.107US1			

		LEE, S J., et al., "High quality ultra thin CVD HfO <sub>2</sub> gate stack with poly-Si gate electrode", <u>Electron Devices Meeting, 2000. IEDM Technical Digest, International, (2000),31-34</u>	
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